

**TECHNICAL MEMORANDUM NO. 10 -
ADDITIONAL SOIL SAMPLING FOR
LEACHABILITY TESTING
REPORT OF FINDINGS**

**WASTE DISPOSAL, INC. SUPERFUND SITE
SANTA FE SPRINGS, CALIFORNIA**

Prepared for

United States Environmental Protection Agency

Prepared by

TRC

Representing

Waste Disposal, Inc. Group (WDIG)

Project No. 94-256

October 1998

2122116

**WASTE DISPOSAL INC.
SUPERFUND SITE
Project Coordinator**

October 21, 1998

Project No. 94-256

Mr. Mark Filippini
U.S. Environmental Protection Agency
75 Hawthorne Street, No. H-7-2
San Francisco, California 94105-3901

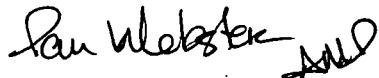
Transmittal
Technical Memorandum (TM) No. 10
Additional Soil Sampling and Leachability Testing Report of Findings
Waste Disposal, Inc.

Dear Mr. Filippini:

This transmittal is to provide you with the Report of Findings for TM No. 10, describing the results of the additional soil sampling and leachability testing conducted at the Waste Disposal, Inc. (WDI) site. The results of this investigation will be used during the feasibility study to expand the range of capping options for areas outside the reservoir and to generally refine the excavation and disposal options.

Please let us know if you have questions about this transmittal.

Sincerely,



Ian Webster
WDIG Project Coordinator

IW/MG:mc
Enclosure

cc: Andria Benner, EPA
Dave Becker, ACOE
Boone and Associates, WDIG
Bill Coakley, EPA ERT
Tim Crist, CIWMB
Mike Finch, DTSC

Ed McGovern, WESTON
Roberto Puga, Project Navigator, Ltd.
Richard Scott, TRC
Mike Skinner, WDIG
Cynthia Wetmore, EPA
John Wondolleck, CDM Federal

TABLE OF CONTENTS

	<u>PAGE NO.</u>
LIST OF TABLES/LIST OF FIGURES	ii
1.0 INTRODUCTION	1
2.0 SAMPLING PROCEDURES AND CHEMICAL ANALYSIS	1
2.1 Descriptions and Procedures for Sampling and Analysis	1
3.0 SUMMARY OF ANALYTICAL RESULTS	2
3.1 Total Volatile Organics (VOCs)	2
3.2 TCLP Analysis Results	3
3.3 STLC Analysis Results	3
3.4 Deionized Water Leach	3
4.0 CONCLUSIONS	4
TABLES	
FIGURES	

TABLE OF CONTENTS

(Continued)

LIST OF TABLES

<u>TABLE NO.</u>	<u>TITLE</u>
1	Sampling Location, Media Sampled and Sampling Interval
2	Analytical Data for Volatile Organic Compounds
3	TCLP Analytical Results
4	Summary of TCLP and STLC Results
5	STLC Laboratory Data
6	DI Water Leachate Laboratory Data

LIST OF FIGURES

<u>FIGURE NO.</u>	<u>TITLE</u>
1	TM No. 10 Soil Sample Locations

1.0 INTRODUCTION

1. This Report of Findings (ROF) has been prepared to summarize the activities conducted at the Waste Disposal, Inc (WDI) Superfund Site as outlined in Technical Memorandum (TM) No. 10 - Additional Soil Sampling and Leachability Testing. TM No. 10 was approved by the United States Environmental Protection Agency (EPA) on September 2, 1998. The purpose of this sampling activity was to determine the potential leachability of constituents of concern from the areas shown in Figure 1, for use in expanding the range of capping and excavation/disposal options for areas outside the reservoir as part of the Feasibility Study (FS) process.
2. The following activities were conducted according to the scope of work outlined in TM No. 10:
 - Collect and analyze fill and waste material samples from five locations onsite.
 - Analyze the samples by Toxicity Characteristics Leaching Procedure (TCLP) and Soluble Threshold Limit Concentration (STLC) methods.

2.0 SAMPLING PROCEDURES AND CHEMICAL ANALYSIS

2.1 DESCRIPTIONS AND PROCEDURES FOR SAMPLING AND ANALYSIS

1. Fill and waste material samples were collected from the areas shown in Figure 1, using procedures outlined in the Revised Supplemental Field Sampling and Analysis Plan (Rev. 2) and the Revised Supplemental Quality Assurance Project Plan (Rev. 2), submitted to Environmental Protection Agency (EPA) November 17, 1997 and approved December 2, 1997. Table 1 shows the location and depth interval for each sample collected.

2. Samples were obtained by hollow-stem auger drilling using a split spoon sampler with 2-inch x 6-inch brass tube liners. The following materials were sampled:
 - Fill material (approximately at 0 to 5 feet).
 - Waste material (sump-like material approximately at 5 to 20 feet).

The brass tube liners were fitted with end caps, labeled and placed into prechilled coolers for delivery to the laboratory under Chain-of-Custody (COC) protocol.

3. Samples for total volatiles analysis (EPA Method 8260A and TCLP) were collected using an EMCOM sampler following EPA Method 5035. The samples were collected immediately on recovery of the brass sampling tube, sealed, placed into prechilled coolers and delivered to the

laboratory under COC protocol. Upon receipt of the samples, the laboratory prepared the TCLP extract within the required holding time (24 hours).

4. The TCLP samples were extracted with acetic acid and with deionized (DI) water at the laboratory using EPA Method 1311 procedures. The extracts were then analyzed using the following EPA Methods:
 - EPA Method 8260 (Volatile Organics).
 - EPA Method 8270 (Semivolatile Organics).
 - EPA Method 8081 (Pesticides and PCBs).
 - EPA Method 6010A, 7060, 7421, 7470 and 7740 for metals.
5. In addition, the samples were extracted using California's CAM-WET test (CR 66699[A]) with DI water (48 hour period to simulate rain infiltration), and analyzed for metals using the EPA methods listed above.

3.0 SUMMARY OF ANALYTICAL RESULTS

3.1 TOTAL VOLATILE ORGANICS (VOCS)

1. Table 2 provides a summary of the total VOC analysis results. The majority of the constituents were nondetect with the exception of the following:
 - WDI-LS-1 (Waste): Naphthalene (23 mg/kg).
 - WDI-LS-2 (Fill): Naphthalene (0.006 mg/kg).
 - WDI-LS-2 (Waste): Naphthalene (0.12 mg/kg).
 - WDI-LS-3 (Waste): Ethylbenzene (11 mg/kg), Naphthalene (37 mg/kg), Xylene (64 mg/kg).
 - WDI-LS-4 (Waste): Benzene (4.2 mg/kg), Ethylbenzene (10 mg/kg), Naphthalene (18 mg/kg), Toluene (28 mg/kg), Xylene (74 mg/kg).
 - WDI-LS-5 (Fill): Naphthalene (1.0 mg/kg).
 - WDI-LS-5 (Waste): Ethylbenzene (2.1 mg/kg), Naphthalene (2.6 mg/kg), Xylene (7.8 mg/kg).
2. The results shown in Table 2 are consistent with the site data from previous investigations (i.e., December 1997 Geoprobe Sampling) which indicates a limited amount of VOCs in the fill and waste material.
3. Using the total VOC data and the TCLP dilution factor, (i.e., 20), the following conclusions can be made from the total VOC data:
 - Fill Samples (WDI-LS-1 through WDI-LS-5):
 - VOCs would be below TCLP and MCL limits.

- Waste Samples (WDI-LS-1 and WDI-LS-2):
 - VOCs would be below TCLP limits.
- Waste Samples (WDI-LS-3, WDI-LS-4 and WDI-LS-5):
 - VOCs would be below TCLP limits for all the constituents with the exception of vinyl chloride in sample WDI-LS-3. Sample WDI-LS-3 had a high detection limit (1 to 2 mg/kg) for vinyl chloride; however, the result does not necessarily mean that vinyl chloride is present.

3.2 TCLP ANALYSIS RESULTS

1. The results of the TCLP testing are provided in Table 3. A summary of the TCLP data is provided in Table 4.
2. Based on the TCLP results there were no samples which indicated detectable levels exceeding TCLP limits.
3. As shown in Table 4, several constituents had elevated TCLP detection and reporting limits. However, using the standard one half the detection limit for each compound, there would be no TCLP exceedances with the exception of vinyl chloride which had a detection limit of greater than twice the TCLP limit. Again, this result does not necessarily mean that vinyl chloride is present.

3.3 STLC ANALYSIS RESULTS

1. The California Wet Test, also known as the STLC Test, is generally considered to be more aggressive than the Federal TCLP Test. The STLC analysis focuses on metal concentrations. Table 5 provides a summary of the STLC data. As indicated in Table 5, one exceedance of the STLC for lead was observed, in Sample WDI-LS-5 (fill). The sample contained 5.07 mg/L lead compared to the STLC limit of 5.0 mg/L. This exceedance is not considered significant, since it is well within the expected accuracy of the method.

3.4 DEIONIZED WATER LEACH

1. To determine the potential for leaching of constituents due to rainwater infiltration, the samples were also extracted using DI water for 48 hours, in comparison to the standard 18 hour TCLP

extraction procedure. Table 6 provides a summary of the DI water leaching results. The results of this test indicated the following:

- The use of DI water significantly reduces the amount of leachable constituents.
- No exceedances of the TCLP criteria were observed.

4.0 CONCLUSIONS

1. Based on the data generated, it appears that the fill and waste materials are not considered hazardous by Federal TCLP or State STLC criteria. The only exception to this conclusion is vinyl chloride which had a significantly high detection limit in this testing episode to determine the status of vinyl chloride. However, based on the other VOC levels, it is unlikely that vinyl chloride will exceed the TCLP limit. As discussed in Section 3.3, one minor STLC exceedance was observed for lead in Sample WDI-LS-5 (fill). This exceedance is not considered significant since the result is well within the expected range of accuracy for the method.
2. Due to some of the high detection limits observed during this test, a full evaluation of the potential leaching constituents above the maximum contaminant levels (MCLs) for drinking water could not be completed. However, as indicated in Table 3, a significant number of the constituents would likely be below the MCLs given reduced detection limits.
3. Evaluation of the deionized leaching results confirmed that the potential for leaching under rain infiltration conditions is very low, and well below the TCLP acid extraction levels. This indicates that it is unlikely that significant leaching has occurred in the past, which is supported by quarterly ground water data collected at the site.

Recyclable and made from recycled paper



TABLE 1

**SAMPLING LOCATION, MEDIA SAMPLED
AND SAMPLING INTERVAL
WASTE DISPOSAL, INC. SUPERFUND SITE**

SAMPLE LOCATION	SAMPLE I.D.	MEDIA SAMPLED	SAMPLE INTERVAL (ft)
Area 7	WDI-LS-1(F)	Fill	3 to 4.5
	WDI-LS-1(W)	Waste	10 to 11.5
Area 4	WDI-LS-2(F)	Fill	3 to 4.5
	WDI-LS-2(W)	Waste	10 to 11.5
Area 5	WDI-LS-3(F)	Fill	3 to 4.5
	WDI-LS-3(W)	Waste	10 to 11.5
Area 2 (C&E)	WDI-LS-4(F)	Fill	2.5 to 4
	WDI-LS-4(W)	Waste	7 to 8.5
Area 2 (Reservoir)	WDI-LS-5(F)	Fill	3 to 4.5
	WDI-LS-5(W)	Waste	10 to 11.5

94-256/REPORTS/AdSoSa (10/21/98/ey)

F = Fill material

W = Waste material

TABLE 2
ANALYTICAL DATA FOR
VOLATILE ORGANIC COMPOUNDS
WASTE DISPOSAL, INC. SUPERFUND SITE

CONSTITUENT	SAMPLE IDENTIFICATION AND ANALYTICAL RESULTS (EPA METHOD 8260)									
	WDI-LS-1		WDI-LS-2		WDI-LS-3		WDI-LS-4		WDI-LS-5	
	Fill	Waste	Fill	Waste	Fill	Waste	Fill	Waste	Fill	Waste
Benzene	<0.0057	<1.0	<0.0051	<0.0088	<0.0049	<4.5	<0.0087	4.2	<0.76	<1.2
Carbon Tetrachloride	<0.0057	<1.0	<0.0051	<0.0088	<0.0049	<4.5	<0.0087	<1.4	<0.76	<1.2
Chlorobenzene	<0.0057	<1.0	<0.0051	<0.0088	<0.0049	<4.5	<0.0087	<1.4	<0.76	<1.2
Chloroform	<0.0057	<1.0	<0.0051	<0.0088	<0.0049	<4.5	<0.0087	<1.4	<0.76	<1.2
1,2-Dibromoethane	<0.0057	<1.0	<0.0051	<0.0088	<0.0049	<4.5	<0.0087	<1.4	<0.76	<1.2
1,4-Dichlorobenzene	<0.0057	<1.0	<0.0051	<0.0088	<0.0049	<4.5	<0.0087	<1.4	<0.76	<1.2
1,2-Dichloroethane	<0.0057	<1.0	<0.0051	<0.0088	<0.0049	<4.5	<0.0087	<1.4	<0.76	<1.2
1,1-Dichloroethylene	<0.0057	<1.0	<0.0051	<0.0088	<0.0049	<4.5	<0.0087	<1.4	<0.76	<1.2
Ethylbenzene	<0.0057	<1.0	<0.0051	<0.0088	<0.0049	11	<0.0087	10	<0.76	2.1
Methylene Chloride	<0.0057	<1.0	<0.0051	<0.0088	<0.0049	<4.5	<0.0087	<1.4	<0.76	<1.2
Naphthalene	<0.0057	23	0.0061	0.12	<0.0049	37	<0.0087	18	1	2.6
Tetrachloroethylene	<0.0057	<1.0	<0.0051	<0.0088	<0.0049	<4.5	<0.0087	<1.4	<0.76	<1.2
Toluene	<0.0057	<1.0	<0.0051	<0.0088	<0.0049	<4.5	<0.0087	28	0.8	<1.2
1,1,1-Trichloroethane	<0.0057	<1.0	<0.0051	<0.0088	<0.0049	<4.5	<0.0087	<1.4	<0.76	<1.2
Trichloroethylene	<0.0057	<1.0	<0.0051	<0.0088	<0.0049	<4.5	<0.0087	<1.4	<0.76	<1.2
Vinyl Chloride	<0.011	<2.0	<0.01	<0.018	<0.0099	<8.6	<0.017	<2.6	<1.5	<2.3
Xylene	<0.0057	<1.0	0.025	<0.0088	<0.0049	64	<0.0087	74	<0.76	7.8

NA = Not Analyzed

94-256/REPORTS/AdSoSa (10/21/98/ey)

Note: All concentrations are reported in ppm (mg/L and mg/kg = ppm).

Numbers in bold indicate a detected concentration.

TABLE 3
TCLP ANALYTICAL RESULTS
WASTE DISPOSAL, INC. SUPERFUND SITE

Page 1 of 2

CHEMICAL	TCLP LIMIT (mg/L)	STLC (mg/L)	MCL (mg/L)	TTLC (mg/kg)	SAMPLE IDENTIFICATION ANALYTICAL RESULTS (EPA METHODS 8260, 8270, 8081, 6010A, 7060, 7421, 7470 AND 7740)									
					WDI-LS-1		WDI-LS-2		WDI-LS-3		WDI-LS-4		WDI-LS-5	
					Fill	Waste	Fill	Waste	Fill	Waste	Fill	Waste	Fill	Waste
Arsenic	5	5	0.05	500	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Barium	100	100	1,000	10,000	0.503	3.09	0.75	2.27	0.465	6.89	0.9	2.1	0.275	0.716
Beryllium	NE	0.75	0.004	75	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Cadmium	1	1	0.005	100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0181	<0.01	<0.01	<0.01
Chromium	5	5	0.05	500	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Lead	5	5	0.015	1,000	<0.075	<0.075	<0.075	<0.075	<0.075	<0.075	<0.075	<0.075	<0.075	<0.075
Mercury	0.2	0.2	0.002	20	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Selenium	1	1	0.05	100	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Silver	5	5	0.1	500	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
Thallium	NE	7	0.002	70	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Anthracene	NE	NE	NE	NE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	0.5	NE	0.001	NE	<0.028	<1.0	<0.67	<0.94	<0.67	<0.94	<0.68	<1.2	<0.73	<0.92
Carbon Tetrachloride	0.5	NE	0.0005	NE	<0.028	<1.0	<0.67	<0.94	<0.67	<0.94	<0.68	<1.2	<0.73	<0.92
Chlordane	0.03	0.25	0.0001	2.5	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Chlorobenzene	100	NE	0.07	NE	<0.028	<1.0	<0.67	<0.94	<0.67	<0.94	<0.68	<1.2	<0.73	<0.92
Chloroform	6	NE	NE	NE	<0.028	<1.0	<0.67	<0.94	<0.67	<0.94	<0.68	<1.2	<0.73	<0.92
1,4-Dichlorobenzene	7.5	NE	0.005	NE	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

TCLP = Toxicity Characteristics Leaching Procedure, 40 CFR, Part 26.

STLC = Soluble Threshold Limit Concentration, CCR Title 22.

MCL = Maximum Contaminant Level based on CCR Title 22 (MCLs will be used to assess ground water protectiveness based on TCLP and STLC results).

TTLC = Total Threshold Limit Concentration, CCR Title 22.

NE = None Established.

NA = Not Analyzed.

= Potential exceedance of TCLP levels due to elevated detection limits.

Note: All concentrations are reported in ppm (mg/L and mg/kg = ppm).
Numbers in bold indicate a detectable concentration.

(1) Results pending.



TABLE 3
TCLP LABORATORY DATA
WASTE DISPOSAL, INC. SUPERFUND SITE
(Continued)

Page 2 of 2

CHEMICAL	TCLP LIMIT (mg/L)	STLC (mg/L)	MCL (mg/L)	TTLC (mg/kg)	SAMPLE IDENTIFICATION ANALYTICAL RESULTS (EPA METHODS 8260, 8270, 8081, 6010A, 7060, 7421, 7470 AND 7740)									
					WDI-LS-1		WDI-LS-2		WDI-LS-3		WDI-LS-4		WDI-LS-5	
					Fill	Waste	Fill	Waste	Fill	Waste	Fill	Waste	Fill	Waste
1,2-Dichloroethane	0.5	NE	0.0005	NE	<0.028	<1.0	<0.67	<0.94	<0.67	<0.94	<0.68	<1.2	<0.73	<0.92
1,1-Dichloroethylene	0.7	NE	0.006	NE	<0.028	<1.0	<0.67	<0.94	<0.67	<0.94	<0.68	<1.2	<0.73	<0.92
Heptachlor	0.008	0.47	0.00001	4.7	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Lindane	0.04	0.4	0.0002	4	<0.0004	<0.004	<0.0004	<0.004	<0.0004	<0.004	<0.0004	<0.004	<0.0004	<0.004
Pentachlorophenol	100	1.7	0.001	17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Polychlorinated Biphenyls	NE	5	0.0005	50	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Tetrachloroethylene	0.7	NE	0.005	NE	<0.028	<1.0	<0.67	<0.94	<0.67	<0.94	<0.68	<1.2	<0.73	<0.92
Trichloroethylene	0.5	204	0.005	2,400	0.21	<1.0	<0.67	<0.94	<0.67	<0.94	<0.68	<1.2	<0.73	<0.92
Vinyl Chloride	0.2	NE	0.0005	NE	<0.055	<2.1	<1.3	<1.9	<1.3	<1.9	<1.4	<2.4	<1.5	<1.8

TCLP = Toxicity Characteristics Leaching Procedure, 40 CFR, Part 26.

STLC = Soluble Threshold Limit Concentration, CCR Title 22.

MCL = Maximum Contaminant Level based on CCR Title 22 (MCLs will be used to assess ground water protectiveness based on TCLP and STLC results).

TTLC = Total Threshold Limit Concentration, CCR Title 22.

NE = None Established.

NA = Not Analyzed.

= Potential exceedance of TCLP due to elevated detection limits.

Note: All concentrations are reported in ppm (mg/L and mg/kg = ppm).
Numbers in bold indicate a detectable concentration.

94-256/REPORTS/AdSoSa (10/21/98/cy)

TABLE 4
SUMMARY OF TCLP AND STLC RESULTS
WASTE DISPOSAL, INC. SUPERFUND SITE

Page 1 of 4

SAMPLE NO.	AREA	SAMPLE TYPE	TCLP EXTRACT RESULTS	STLC EXTRACT RESULTS
			Constituents Exceeding TCLP ⁽¹⁾	Constituents Exceeding STLC
WDI-LS-1	7	Fill	<u>VOC's</u> None <u>SVOC's</u> Not Applicable <u>Metals</u> None <u>Pesticides/PCB's</u> None	<u>VOC's</u> Not Applicable <u>SVOC's</u> Not Applicable <u>Metals</u> None <u>Pesticides/PCB's</u> Not Applicable
WDI-LS-1	7	Waste	<u>VOC's</u> Benzene ⁽²⁾ Carbon Tetrachloride ⁽²⁾ 1,2 Dichloroethane ⁽²⁾ 1,1 Dichloroethene ⁽²⁾ PCE ⁽²⁾ TCE ⁽²⁾ Vinyl Chloride ⁽³⁾ <u>SVOC's</u> Not Applicable <u>Metals</u> None <u>Pesticides/PCB's</u> None	<u>VOC's</u> Not Applicable <u>SVOC's</u> Not Applicable <u>Metals</u> None <u>Pesticides/PCB's</u> Not Applicable
WDI-LS-2	4	Fill	<u>VOC's</u> Benzene ⁽²⁾ Carbon Tetrachloride ⁽²⁾ 1,2 Dichloroethane ⁽²⁾ 1,1 Dichloroethene ⁽²⁾ TCE ⁽²⁾ Vinyl Chloride ⁽³⁾ <u>SVOC's</u> Not Applicable <u>Metals</u> None <u>Pesticides/PCB's</u> None	<u>VOC's</u> Not Applicable <u>SVOC's</u> Not Applicable <u>Metals</u> None <u>Pesticides/PCB's</u> Not Applicable

(1) Laboratory reporting limit for this compound exceeds TCLP limits.

(2) Using a value of one half the detection limit, the compound would be less than the TCLP limit.

(3) Does not necessarily mean vinyl chloride is present, only that the detection limit is 1.0 to 1.9 mg/L.

TABLE 4
SUMMARY OF TCLP AND STLC RESULTS
WASTE DISPOSAL, INC. SUPERFUND SITE
(Continued)

Page 2 of 4

SAMPLE NO.	AREA	SAMPLE TYPE	TCLP EXTRACT RESULTS	STLC EXTRACT RESULTS
			Constituents Exceeding TCLP ⁽¹⁾	Constituents Exceeding STLC
WDI-LS-2	4	Waste	<u>VOC's</u> Benzene ⁽²⁾ Carbon Tetrachloride ⁽²⁾ 1,2 Dichloroethane ⁽²⁾ 1,1 Dichloroethene ⁽²⁾ PCE ⁽²⁾ TCE ⁽²⁾ Vinyl Chloride ⁽³⁾ <u>SVOC's</u> Not Applicable <u>Metals</u> None <u>Pesticides/PCB's</u> None	<u>VOC's</u> Not Applicable <u>SVOC's</u> Not Applicable <u>Metals</u> None <u>Pesticides/PCB's</u> Not Applicable
WDI-LS-3	5	Fill	<u>VOC's</u> Benzene ⁽²⁾ Carbon Tetrachloride ⁽²⁾ 1,2 Dichloroethane ⁽²⁾ TCE ⁽²⁾ Vinyl Chloride ⁽³⁾ <u>SVOC's</u> Not Applicable <u>Metals</u> None <u>Pesticides/PCB's</u> None	<u>VOC's</u> Not Applicable <u>SVOC's</u> Not Applicable <u>Metals</u> None <u>Pesticides/PCB's</u> Not Applicable
WDI-LS-3	5	Waste	<u>VOC's</u> Benzene ⁽²⁾ Carbon Tetrachloride ⁽²⁾ 1,2 Dichloroethane ⁽²⁾ 1,1 Dichloroethene ⁽²⁾ PCE ⁽²⁾ TCE ⁽²⁾ Vinyl Chloride ⁽³⁾ <u>SVOC's</u> Not Applicable <u>Metals</u> None <u>Pesticides/PCB's</u> None	<u>VOC's</u> Not Applicable <u>SVOC's</u> Not Applicable <u>Metals</u> None <u>Pesticides/PCB's</u> Not Applicable

(1) Laboratory reporting limit for this compound exceeds TCLP limits.

(2) Using a value of one half the detection limit, the compound would be less than the TCLP limit.

(3) Does not necessarily mean vinyl chloride is present, only that the detection limit is 1.0 to 1.9 mg/L.

TABLE 4

**SUMMARY OF TCLP AND STLC RESULTS
WASTE DISPOSAL, INC. SUPERFUND SITE
(Continued)**

Page 3 of 4

SAMPLE NO.	AREA	SAMPLE TYPE	TCLP EXTRACT RESULTS	STLC EXTRACT RESULTS
			Constituents Exceeding TCLP ⁽¹⁾	Constituents Exceeding STLC
WDI-LS-4	2	Fill	<u>VOC's</u> Benzene ⁽²⁾ Carbon Tetrachloride ⁽²⁾ 1,2 Dichloroethane ⁽²⁾ Vinyl Chloride ⁽³⁾ <u>SVOC's</u> Not Applicable <u>Metals</u> None <u>Pesticides/PCB's</u> None	<u>VOC's</u> Not Applicable <u>SVOC's</u> Not Applicable <u>Metals</u> None <u>Pesticides/PCB's</u> Not Applicable
WDI-LS-4	2	Waste	<u>VOC's</u> Benzene ⁽²⁾ Carbon Tetrachloride ⁽²⁾ 1,2 Dichloroethane ⁽²⁾ 1,1 Dichloroethene ⁽²⁾ TCE ⁽²⁾ Vinyl Chloride ⁽³⁾ <u>SVOC's</u> Not Applicable <u>Metals</u> None <u>Pesticides/PCB's</u> None	<u>VOC's</u> Not Applicable <u>SVOC's</u> Not Applicable <u>Metals</u> Lead ⁽⁴⁾ <u>Pesticides/PCB's</u> Not Applicable
WDI-LS-5	R	Fill	<u>VOC's</u> Benzene ⁽²⁾ Carbon Tetrachloride ⁽²⁾ 1,2 Dichloroethane ⁽²⁾ 1,1 Dichloroethene ⁽²⁾ PCE ⁽²⁾ TCE ⁽²⁾ Vinyl Chloride ⁽³⁾ <u>SVOC's</u> Not Applicable <u>Metals</u> None <u>Pesticides/PCB's</u> None	<u>VOC's</u> Not Applicable <u>SVOC's</u> Not Applicable <u>Metals</u> None <u>Pesticides/PCB's</u> Not Applicable

(1) Laboratory reporting limit for this compound exceeds TCLP limits.

(2) Using a value of one half the detection limit, the compound would be less than the TCLP limit.

(3) Does not necessarily mean vinyl chloride is present, only that the detection limit is 1.0 to 1.9 mg/L.

(4) A value of 5.07 mg/L, marginally exceeded the STLC limit of 5.0 mg/L.

TABLE 4
SUMMARY OF TCLP AND STLC RESULTS
WASTE DISPOSAL, INC. SUPERFUND SITE
(Continued)

Page 4 of 4

SAMPLE NO.	AREA	SAMPLE TYPE	TCLP EXTRACT RESULTS	STLC EXTRACT RESULTS
			Constituents Exceeding TCLP ⁽¹⁾	Constituents Exceeding STLC
WDI-LS-5	R	Waste	<u>VOC's</u> Benzene ⁽²⁾ Carbon Tetrachloride ⁽²⁾ 1,2 Dichloroethane ⁽²⁾ 1,1 Dichloroethene ⁽²⁾ PCE ⁽²⁾ TCE ⁽²⁾ Vinyl Chloride ⁽³⁾ <u>SVOC's</u> Not Applicable <u>Metals</u> None <u>Pesticides/PCB's</u> None	<u>VOC's</u> Not Applicable <u>SVOC's</u> Not Applicable <u>Metals</u> None <u>Pesticides/PCB's</u> Not Applicable

94-256/REPORTS/AdSoSa (10/21/98/ey)

- (1) Laboratory reporting limit for this compound exceeds TCLP limits.
- (2) Using a value of one half the detection limit, the compound would be less than the TCLP limit.
- (3) A value of 5.07 mg/L, marginally exceeded the STLC limit of 5.0 mg/L.

TABLE 5
STLC LABORATORY DATA
WASTE DISPOSAL, INC. SUPERFUND SITE

CHEMICAL	TCLP LIMIT (mg/L)	STLC (mg/L)	MCL (mg/L)	TTLC (mg/kg)	EPA METHODS 8260, 8270, 8081, 6010A, 7060, 7421, 7470 AND 7740 RESULTS									
					WDI-LS-1		WDI-LS-2		WDI-LS-3		WDI-LS-4		WDI-LS-5	
					Fill	Waste	Fill	Waste	Fill	Waste	Fill	Waste	Fill	Waste
Antimony ⁽¹⁾	NE	15	0.006	500	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Arsenic	5	5	0.05	500	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Barium	100	100	1,000	10,000	4.2	12.7	6.5	19.6	4.46	22	5.8	9.92	4.91	7.2
Beryllium	NE	0.75	0.004	75	0.00696	0.00918	0.00802	0.00627	0.0062	0.00911	0.00689	0.00964	0.013	0.00876
Cadmium	1	1	0.005	100	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.0911	<0.05	<0.05	<0.05
Chromium	5	5	0.05	500	0.163	0.198	0.333	0.201	0.507	0.199	0.11	0.241	0.119	0.461
Copper	NE	25	1	2,500	1.9	0.115	5.22	0.178	1.71	0.579	11.7	0.135	0.101	0.796
Lead	5	5	0.015	1,000	<0.375	0.64	2.64	1.69	1.04	0.529	2.52	4.94	5.07	4.06
Mercury	0.2	0.2	0.002	20	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Selenium	1	1	0.05	100	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Silver	5	5	0.1	500	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035
Thallium	NE	7	0.002	70	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Zinc	NE	250	5	5,000	1.49	1	7.89	7.3	6.1	20.6	10.3	12.1	4.64	8.22

94-256/REPORTS/AdSoSa (10/21/98/cy)

TCLP = Toxicity Characteristics Leaching Procedure, 40 CFR, Part 26

STLC = Soluble Threshold Limit Concentration, CCR Title 22

MCL = Maximum Contaminant Level based on CCR Title 22 (MCLs will be used to assess ground water protectiveness based on TCLP and STLC results)

TTLC = Total Threshold Limit concentration, CCR Title 22

NE = None Established

NA = Not Analyzed

Note: All concentrations are reported in ppm (mg/L and mg/kg = ppm). Concentrations in bold indicate a detectable value.

TABLE 6
DI WATER LEACHATE LABORATORY DATA
WASTE DISPOSAL, INC. SUPERFUND SITE

Page 1 of 2

CHEMICAL	TCLP LIMIT (mg/L)	STLC (mg/L)	MCL (mg/L)	TTL (mg/kg)	EPA METHODS 8260, 8270, 8081, 6010A, 7060, 7421, 7470 AND 7740 RESULTS										
					WDI-LS-1		WDI-LS-2		WDI-LS-3		WDI-LS-4		WDI-LS-5		
					Fill	Waste	Fill	Waste	Fill	Waste	Fill	Waste	Fill	Waste	
Arsenic	5	5	0.05	500	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Barium	100	100	1,000	10,000	<0.02	0.169	<0.02	0.113	0.0372	0.0354	0.0279	0.0343	0.0322	0.0325	
Beryllium	NE	0.75	0.004	75	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
Cadmium	1	1	0.005	100	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Chromium	5	5	0.05	500	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Lead	5	5	0.015	1,000	<0.375	<0.375	<0.375	<0.375	<0.375	<0.375	<0.375	<0.375	<0.375	<0.375	
Mercury	0.2	0.2	0.002	20	<0.002	<0.002	<0.003	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	
Selenium	1	1	0.05	100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Silver	5	5	0.1	500	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	
Thallium	NE	7	0.002	70	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Zinc	NE	250	5	5,000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
Aldrin	NE	0.14	NE	1.4	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
Anthracene	NE	NE	NE	NE	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Benzene	0.5	NE	0.001	NE	(1)	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.13	<0.025	<0.025
Benzo(a)pyrene	NE	NE	NE	NE	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(b)fluoranthene	NE	NE	NE	NE	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(k)fluoranthene	NE	NE	NE	NE	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Carbon Tetrachloride	0.5	NE	0.0005	NE	NA	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Chlordane	0.03	0.25	0.0001	2.5	<0.00015	<0.0003	<0.00015	<0.00015	<0.00015	<0.00015	<0.00015	<0.00015	<0.00015	<0.00015	<0.00015
Chlorobenzene	100	NE	0.07	NE	NA	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Chloroform	6	NE	NE	NE	NA	<0.025	<0.025	0.036	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Chrysene	NE	NE	NE	NE	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
DDT	NE	0.1	NE	1	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

(1) Data not received.

TCLP = Toxicity Characteristics Leaching Procedure, 40 CFR, Part 26

STLC = Soluble Threshold Limit Concentration, CCR Title 22

MCL = Maximum Contaminant Level based on CCR Title 22 (MCLs will be used to assess ground water protectiveness based on TCLP and STLC results).

TTL = Total Threshold Limit concentration, CCR Title 22

NE = None Established

NA = Not Analyzed.

Note: All concentrations are reported in ppm (mg/L and mg/kg = ppm).



TABLE 6
DI WATER LEACHATE LABORATORY DATA
WASTE DISPOSAL, INC. SUPERFUND SITE
(Continued)

Page 2 of 2

CHEMICAL	TCLP LIMIT (mg/L)	STLC (mg/L)	MCL (mg/L)	TTLC (mg/kg)	EPA METHODS 8260, 8270, 8081, 6010A, 7060, 7421, 7470 AND 7740 RESULTS									
					WDI-LS-1		WDI-LS-2		WDI-LS-3		WDI-LS-4		WDI-LS-5	
					Fill	Waste	Fill	Waste	Fill	Waste	Fill	Waste	Fill	Waste
1,4-Dichlorobenzene	7.5	NE	0.005	NE	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,2-Dichloroethane	0.5	NE	0.0005	NE	NA	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
1,1-Dichloroethylene	0.7	NE	0.006	NE	NA	<0.025	<0.025	0.063	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Dieldrin	NE	0.08	NE	8	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Ethylbenzene	NE	NE	0.7	NE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	NE	NE	NE	NE	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Fluorene	NE	NE	NE	NE	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Heptachlor	0.008	0.47	0.00001	4.7	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Lindane	0.04	0.4	0.0002	4	<0.00005	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
2-Methylnaphthalene	NE	NE	NE	NE	<0.01	0.0307	<0.01	<0.01	<0.01	<0.01	<0.01	0.0453	<0.01	<0.01
Naphthalene	NE	NE	NE	NE	<0.01	0.0145	<0.01	<0.01	<0.01	<0.01	<0.01	0.0784	<0.01	<0.01
Pentachlorophenol	100	1.7	0.001	17	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Phenanthrene	NE	NE	NE	NE	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Polychlorinated Biphenyls	NE	5	0.0005	50	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Pyrene	NE	NE	NE	NE	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Tetrachloroethylene	0.7	NE	0.005	NE	NA	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Toluene	NE	NE	0.15	NE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1,1-Trichloroethane	NE	NE	0.2	NE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethylene	0.5	204	0.005	2,400	NA	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Vinyl Chloride	0.2	NE	0.0005	NE	NA	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050

TCLP = Toxicity Characteristics Leaching Procedure, 40 CFR, Part 26

STLC = Soluble Threshold Limit Concentration, CCR Title 22

MCL = Maximum Contaminant Level based on CCR Title 22 (MCLs will be used to assess ground water protectiveness based on TCLP and STLC results)

TTLC = Total Threshold Limit concentration, CCR Title 22

NE = None Established

NA = Not Analyzed

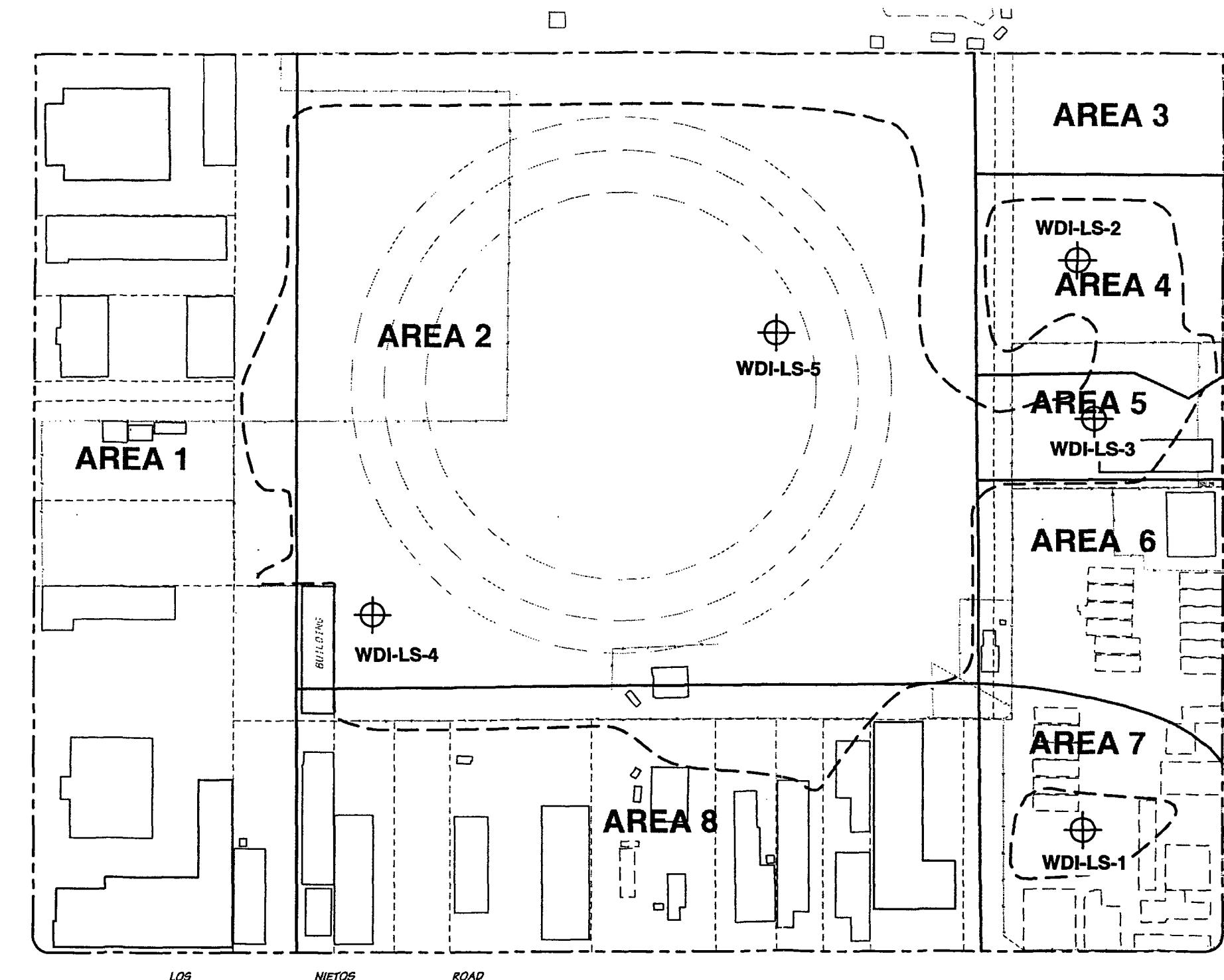
Note: All concentrations are reported in ppm (mg/L and mg/kg = ppm).

TRC

Recyclable and made from recycled paper



FIGURES



LEGEND

- SITE BOUNDARY
- AREA BOUNDARY
- WASTE MATERIAL DELINEATION
- APPROXIMATE TM NO. 10 SOIL SAMPLE LOCATIONS
- WDI-LS-4

NOTE: WASTE MATERIAL DELINEATION WAS DETERMINED BASED ON GEOPROBE DATA COLLECTED DURING SEPTEMBER AND OCTOBER 1997.

0 160 320 FEET
SCALE

TM NO. 10 SOIL SAMPLE LOCATIONS

WASTE DISPOSAL, INC.
SANTA FE SPRINGS, CALIFORNIA

TRC

FIGURE 1

TRC Environmental
Solutions Inc.